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10/773,895	02/05/2004	Brian S. Watson	MP0982 (13036/23)	8338
60537 7590 02/06/2007 BRINKS HOFER GILSON & LIONE/MARVELL P.O. BOX 10395 CHICAGO, IL 60610			EXAMINER BLACKWELL, JAMES H	
			ART UNIT 2176	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/773,895

Applicant(s)

WATSON, BRIAN S.

Examiner

James H. Blackwell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to an amendment filed 11/13/2006 with a priority date of **02/05/2004**.
2. Claims 1-38 are pending.
3. Claims 19-38 are new claims.
4. Claims 1, 13, 19, 27, 30, and 38 are independent claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balding (U.S. Patent No. 4,340,905 filed 09/12/1980, issued 07/20/1982) in view of Nitta et al. (hereinafter Nitta, U.S. Patent Application Publication No. 2004/0060011 A1 filed 09/02/2003; published 03/25/2004).

In regard to independent Claim 1, Balding discloses:

- a color photographic printing device containing:
 - *a) a rendering engine for rendering images onto a medium (Fig. 4, item 55; → photographic printing means for reproducing a color image on photographic film controlled by a microprocessor); and*

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- o *b) an input port for receiving binary image data (Fig. 2, item 14;→ film preview receptacle);*

Balding fails to expressly disclose that the image data is binary in nature:

However, Nitta discloses (Abstract, Pg. 3, Paragraph [0083]) a print preview projector that projects binary images (bitmaps, jpegs) for adjustment and review by a user prior to sending the rendered image to a print device),

Balding continues by disclosing:

- o *c) a print preview projection mechanism for converting the received binary image data into corresponding displayable image data and for projecting the displayable image data for viewing by a user (Fig. 4;→ provides a projection of an image which can be viewed on a video monitor).*

Balding fails to expressly disclose previewing binary image data.

However, Nitta discloses (Fig. 2, Pg. 3, Paragraph [0083]) a print preview projector that projects binary images (bitmaps, jpegs) for adjustment and review by a user prior to sending the rendered image to a print device),

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Balding and Nitta as both inventions relate to the generation of a preview image prior to rendering it to a output (e.g., hardcopy) device. Adding the disclosure of Nitta provides the benefit of rendering binary image data for preview and adjustment prior to printing the image data to avoid wasting expensive output supplies and media.

In regard to dependent Claim 2, Balding discloses:

- *the print preview projection mechanism provides the user with a preview of an image to be rendered defined by the image data prior to rendering of the image data (Col. 3, lines 21-49; Fig. 4; user previews and adjusts from preview on monitor),*
- *wherein the print preview projection mechanism includes a display format mechanism for converting the received binary image data into the corresponding displayable image data (see Fig. 4 projected image is converted to be previewed by user on monitor).*

Balding fails to expressly disclose previewing binary image data.

However, Nitta discloses (Fig. 2, Pg. 3, Paragraph [0083]) a print preview projector that projects binary images (bitmaps, jpegs) for adjustment and review by a user prior to sending the rendered image to a print device),

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Balding and Nitta as both inventions relate to the generation of a preview image and projecting it prior to rendering it to a output (e.g., hardcopy) device. Adding the disclosure of Nitta provides the benefit of rendering binary image data for preview and adjustment prior to printing the image data to avoid wasting expensive output supplies and media.

In regard to dependent Claim 3, Balding discloses:

- *the print preview projection mechanism comprises a projection mechanism for projecting the displayable image data onto a two-dimensional surface and wherein the projected preview image is a two-dimensional image (see Fig. 4 image is projected by item 63, a lens onto item 64, print paper).*

In regard to dependent Claim 4, Balding discloses:

- *the print preview projection mechanism comprises a projection mechanism for projecting the displayable image data into a three-dimensional space (Fig. 4, the space in which the projection is taking place is 3-dimensional) and*
- *wherein the projected preview image is one of a two-dimensional image and a three-dimensional image (Fig. 4, lens (item 63) projects onto print paper (item 64) which is 2-Dimensional).*

In regard to dependent Claim 5, Balding discloses:

- *the print preview projection mechanism further comprises an image manipulation application for allowing a user to manipulate the displayable image data prior to rendering (Col. 3, lines 21-49; Figs. 1, and 4-5; user makes adjustments based on images received on video monitors of the projection and further microprocessor controls adjustments input by user to change the image).*

In regard to dependent Claim 6, Balding discloses:

- *the image manipulation application supports one of the user interface functions selected from the group consisting of:*
 - *editing operations, compositing operations, image processing operations, delete operations and add operations, and other image modification operations (Col. 3, lines 21-49; Figs. 1, and 4-5; user can adjust color levels, density of image prior to printing it based on the projected image).*

In regard to dependent Claim 7, Balding discloses:

- *the input port comprises one of a connection port, a media reader slot, and a receiver (Col. 2, lines 41-48; Fig. 4; film preview receptacle used for holding input (negative) so that it can be projected).*

In regard to dependent Claim 8, Balding discloses:

- *the apparatus communicates with an image source through a communication link (refer to Fig. 5) and wherein the image source provides the image data (Fig. 4) and wherein the image source comprises one of a storage media, an image capture device, a digital camera, a personal communication device, a cellular telephone, a personal digital assistant, and other device external to the image rendering apparatus (image capture device, photo paper) and wherein the communication link comprises one of a wireless link, a wired link, a USB cable, and a channel (wired link as shown in Figs. 4-5).*

In regard to dependent Claim 9, Balding discloses:

- *the image data comprises one of text data, a digital picture data, graphic data, drawing data and images (Col. 2, lines 41-64; image is of a photographic negative to be previewed and printed by the device).*

In regard to dependent Claim 10 (and similarly dependent Claim 17), Balding discloses:

- *the apparatus comprises one of a printer, a facsimile machine, and an all-in-one office machine (Figs. 1, 4-5 disclose a printer).*

In regard to dependent Claim 11, Balding discloses:

- *a plurality of switches for use by a user to control print preview functions and image editing functions; wherein each switch, when activated by the user, generates a signal representing user input; and wherein the signal is provided to the print preview projection mechanism (Col. 3, lines 21-49; Fig. 1 items (39-42, 71)).*

In regard to dependent Claim 12, Balding discloses:

- *wherein the image manipulation comprises: a multiple image manipulation module for receiving image data and user input and based thereon for generating a composite image file (Col. 3, lines 21-49; Fig. 1 items (39-42, 71)).*

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- a source write unit for writing data to an image source (Fig. 4, microprocessor 55 instructs items 59, 59a, 65-70 to adjust via user inputs to print picture).

In regard to independent Claim 13, Claim 13 contains subject matter similar to that found in Claim 1 and is similarly rejected.

In addition, Balding discloses:

- *d) a view finder for use by a user to view images (Fig. 1, item 48).*
- *e) a projection mechanism, coupled to the viewfinder, for projecting the displayable image data into the viewfinder (Fig. 4 projection mechanism 63 coupled to viewfinder (Fig. 1, items 13, 11)).*

In regard to dependent Claim 14, Balding discloses:

- *the viewfinder is one of integrated with the image rendering apparatus and detachable from the image rendering apparatus (integrated as shown in Figs. 1-5).*

In regard to dependent Claim 15, Balding discloses:

- *the viewfinder is coupled to the projection mechanism through one of a wired link and a wireless link (wired link as shown in Figs. 1-5).*

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In regard to dependent Claim 16, Balding discloses:

- *the viewfinder is implemented as one of a pair of virtual reality glasses, a two-dimensional viewer, and a three-dimensional viewer (video monitor, typically 2-D as shown in Figs. 1-5),*
- *wherein the projected image is one of projected onto a two-dimensional surface and projected into a three-dimensional space for viewing (2-D (item 64) as shown in Figs. 1-5).*

In regard to dependent Claim 18, dependent Claim 18 contains subject matter similar in content to that of dependent Claims 11 and 12 and is rejected along the same rationale.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 19-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Nitta.

In regard to independent Claim 19 (and similarly independent Claims 27, and 30), Nitta discloses:

- *a method for rendering an image* (Abstract; → a print preview projector for a printing device), *the method comprising:*
 - *receiving binary image data from an external data source, the binary image data defining an image to be viewed or rendered* (Fig. 1; → a system consisting of a data processor (10), a data processor (20), and a print unit (30). The data processor stores bitmap data (e.g., jpeg) from which the user can select a particular file containing binary content (bitmaps, jpeg are well-known to typically be of binary format) for transmittal (13) to an image display unit (20). Thus, the binary image data is from an external data source (i.e., the data processor)).
 - *converting the received binary image data into corresponding displayable image data* (Figs. 1-2, Pg. 5, Paragraphs [0099-0101]; → the projection adjuster 23 varies projection adjustment values, which are parameters including the focus, size, position, projection angle, and color of the screen image to be projected, according to user's actions. Regarding the color, for example, hue, lightness, contrast, chroma, etc. can be specified, and so on. For the projection adjustment values, default values or preset values may be used, especially when there is no need for adjustment or when given content data is projected for the first time. Also, before projecting content data, projection position or size maybe specified in advance using a predetermined method. The projection position or size may be specified, for example, as follows: a pair of diagonals which define a rectangle of a

projection area maybe projected onto the projection plane, allowing the user to determine the projection position or size, or a pair of diagonals which define a rectangle of a projection area may be entered by the user in the printing device 1.

- *using the displayable image data to produce an image for viewing by a user* (Fig. 2, steps S1-S8; → acquire and project binary image data to a surface for viewing and make adjustments for eventual printing to medium);
- *using the received binary image data to render the image onto a medium* (Fig. 2, steps S9-19; → confirm projected image is the one to be printed and print it).

In regard to dependent Claim 20 (and similarly dependent Claim 31), Nitta discloses:

- *manipulating the binary image data prior to rendering the image* (Fig. 1; → item 26 in image display unit determines projection plane and feeds that to projection data generator 22);

In regard to dependent Claim 21 (and similarly dependent Claim 32), Nitta
discloses:

- *manipulating the binary image data comprises*
 - *editing operations, compositing operations, image processing operations, deleting operations and adding operations (Fig. 2, steps S3-S6; → make adjustments to data so that when projected it renders to what the user desires the print output to look like).*

In regard to dependent Claim 22 (and similarly dependent Claim 33), Nitta
discloses:

- *receiving the binary image data comprises*
 - *receiving the binary image data through a communication link (Pg. 7, Paragraph [0157]; → communications means in the data processor 10, image display unit 20, and print unit 30 may employ wire communications such as USB (Universal Serial Bus), IEEE1394, or 10BaseT or wireless communications such as IEEE802.11x, Bluetooth, or optical communications).*

In regard to dependent Claim 23 (and similarly dependent Claim 34), Nitta
discloses:

- *receiving the binary image data through a communication link comprises*
 - receiving the binary image data from one of a storage media, an image capture device, a digital camera, a personal communication device, a cellular telephone and a personal digital assistant (Pg. 3, Paragraphs [0082-0083]; → a data processor (10) comprises a content data storage (11) (*storage media*). The content data storage (11) stores various content data selectable as print data. The content data are in bit map format such as JPEG (Joint Photographic Experts Group) format or in vector format such as SVG (Scalable Vector Graphics) format).

In regard to dependent Claim 24 (and similarly dependent Claim 35), Nitta
discloses:

- *receiving the binary image data through a communication link comprises*
 - *receiving the binary image data over one of wireless link, a wired link and a USB cable* (Pg. 7, Paragraph [0157]; → communications means in the data processor 10, image display unit 20, and print unit 30 may employ wire communications such as USB (Universal Serial Bus), IEEE1394, or 10BaseT or wireless communications such as IEEE802.11x, Bluetooth, or optical communications).

In regard to dependent Claim 25 (and similarly dependent Claim 36), Nitta
discloses:

- *receiving the binary image data through a communication link comprises*
 - *receiving one or more of text data, digital picture data, graphic data, drawing data and images (Pg. 3, Paragraph [0083];→ The content data storage (11) stores various content data selectable as print data. The content data are in bit map format such as JPEG (Joint Photographic Experts Group) format or in vector format such as SVG (Scalable Vector Graphics) format).*

In regard to dependent Claim 26 (and similarly dependent Claim 37), Nitta
discloses:

- *detecting actuation of one or more switches by the user and based on the detected actuation (Pg. 5, Paragraph [0115];→ user selects content data to be printed (Step S1); Paragraph [00118];→ user can vary projection adjustment values (Step S6); Paragraph [0120];→ user confirms that content projected is the correct content to be printed (Step S9));*
- *generating a signal representing user input (Pg. 5, Paragraphs [0115, 0118, 0120];→ user performs functions that generate signals that command actions to the image display unit (20)) and*
- *providing the signal to control one or more of producing the image for viewing by the user and rendering the image onto the medium (Fig. 2, at least steps S1, S6,*

S9;→ represent steps that induce signals to control various operations on projected image).

In regard to dependent Claim 28, Nitta discloses:

- *the means for receiving binary image data comprises*
 - *one ore more of a media reader, a connection port for coupling to a cable, and a transceiver* (Pg. 7, Paragraph [0157];→ communications means in the data processor 10, image display unit 20, and print unit 30 may employ wire communications such as USB (Universal Serial Bus), IEEE1394, or 10BaseT or wireless communications such as IEEE802.11x, Bluetooth, or optical communications; suggests both wired and wireless ports. Additionally, Fig. 1 depicts content and print data transmitters and receivers).

In regard to dependent Claim 29, Nitta discloses:

- *the means for converting the received binary image data comprises*
 - *an image manipulation application to manipulate the received binary image data prior to rendering* (Fig. 2, steps S3-S6;→ make adjustments to data so that when projected it renders to what the user desires the print output to look like; Pg. 4, Paragraph [0101];→ making adjustments to the projected image can be performed manually or by displaying an

adjustment screen on a predetermined display unit, suggesting an image manipulation software).

In regard to independent Claim 38, Nitta discloses:

- *an image rendering apparatus* (Title; → an image forming apparatus), *comprising*:
 - an input port configured to engage an external data source and to receive from the external data source binary image data defining an image to be rendered (Fig. 1; → data processor contains content storage and a means to select a particular content for transmittal to an image display unit wherein the content is binary (e.g., jpeg, bitmaps));
 - a print preview projection mechanism coupled to the input port (Fig. 1; → items 10 (data processor) in connection with item 20 (image display unit)) and configured to convert the received binary image data to displayable image data (Fig. 1; → items 22, 26 generate data for projection unit 24 and projection adjuster 23) including an image editor to receive as raw image data the received binary image data and produce edited image data in response to user editing input signals (Pg. 4, Paragraph [[0099, 0101]; → user (via software or mechanicals) adjustable to adjust projection adjustment values, which are parameters including the focus, size, position, projection angle, and color of the screen image to be projected, according to user's actions. Regarding the color, for example, hue, lightness, contrast, chroma, etc. can be specified, and so on), *and*

- *a displayable data generator to generate displayable raw image data from the raw image data and to produce displayable edited image data from the edited image data (Fig. 1, items 22-26; → work together to edit (adjust) and correct projected binary image data prior to printing it).*
- *a projection mechanism responsive to one of the displayable raw image data and the displayable edited image data to produce a display for viewing by a user (Fig. 1, items 22-26, Figs. 8-10, examples of projector and projected image and various relationships to printing devices); and*
- *a rendering engine coupled with the image editor to render the image using the edited image data (Fig. 1, items 22-26; → work together to render, adjust (edit) and make corrections to image which gets projected).*

Response to Arguments

9. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant primarily argues that the prior art of Balding fails to disclose the use and rendering of binary image content. The Examiner would agree to the extent that the original content was "analog" (e.g., a color negative rendered onto film) which was imaged by video. Balding also does not disclose whether or not the video rendering was analog or digital. If Balding's image were "copied" from the negative with a digital imager, then the Examiner would argue that Balding did disclose binary data. However, Balding does not specify analog or digital imagers and so the Examiner introduces the

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prior art of Nitta, which discloses a similar mechanism that starts with binary content (bitmaps, .jpeg image formats).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James H. Blackwell
01/22/2007


Heather R. Herndon
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